



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Area
GUAY SON [CONHER]
Machine Id
BM NAINARI 2602004123-4 - IBACO BM NAINARI
Component
Diesel Engine
Fluid
RALOY 15W40 (160 LTR)

RECOMMENDATION

We recommend you service the filters on this component. Resample at the next service interval to monitor. (Customer Sample Comment: Fluid: Raloy 15W40)

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		KL0014524	KL0014137	KL0013405
Sample Date		Client Info		20 Mar 2024	06 Feb 2024	14 Nov 2023
Machine Age	hrs	Client Info		0	20451	19549
Oil Age	hrs	Client Info		509	400	272
Filter Age	hrs	Client Info		509	400	272
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				ABNORMAL	ABNORMAL	ATTENTION

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	6	6	3
Chromium	ppm	ASTM D5185m	>20	0	0	0
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	1	2	1
Lead	ppm	ASTM D5185m	>40	1	<1	<1
Copper	ppm	ASTM D5185m	>330	<1	<1	<1
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

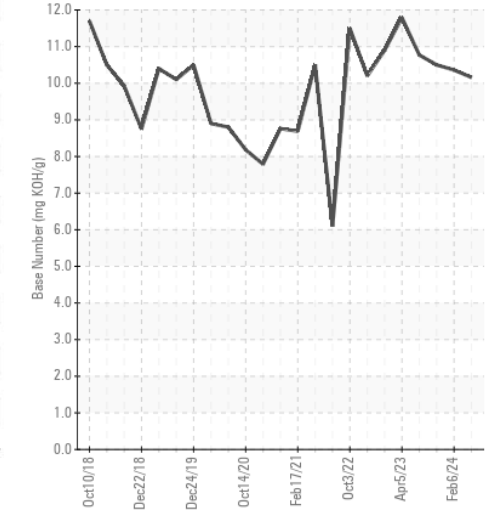
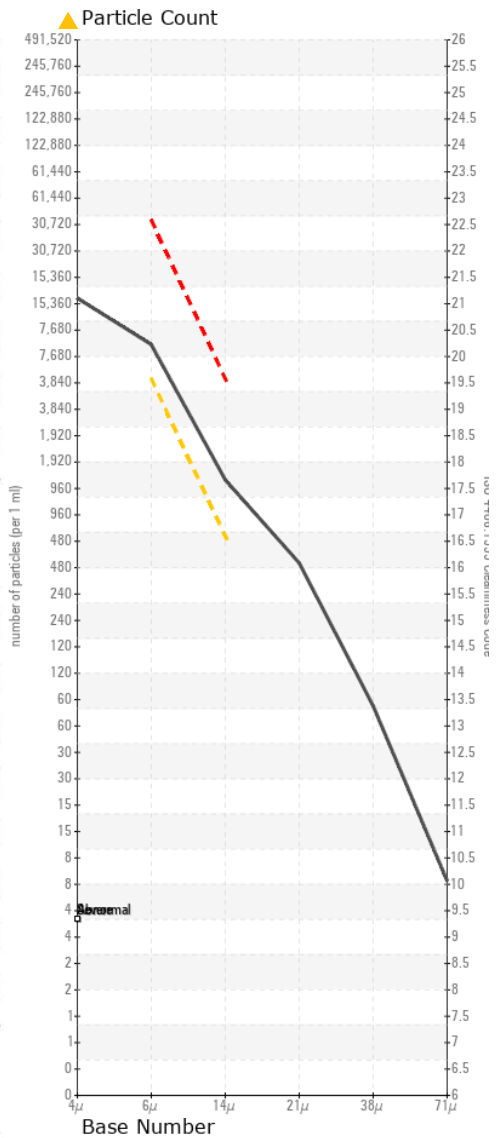
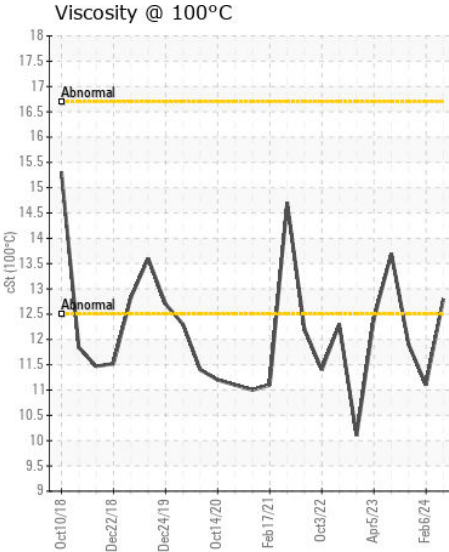
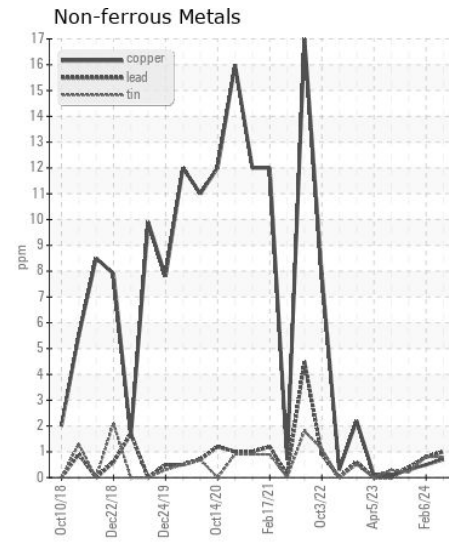
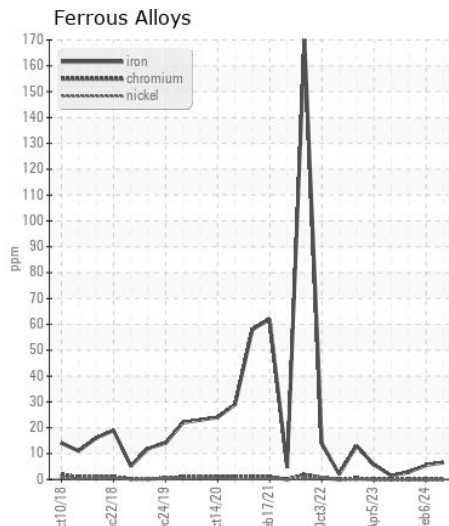
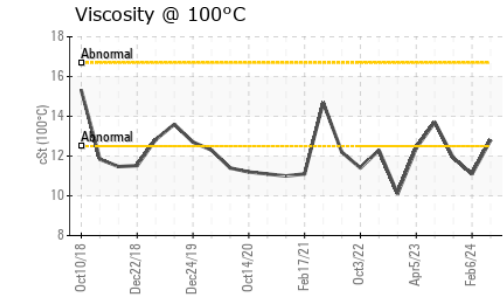
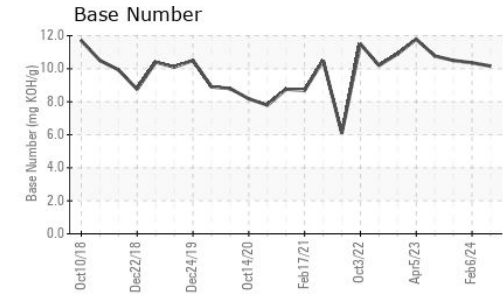
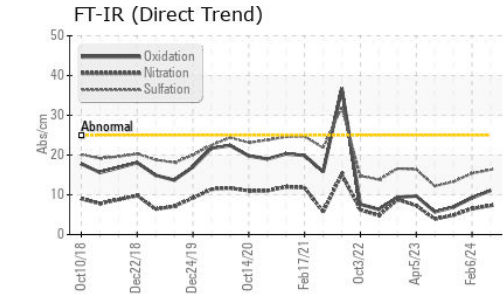
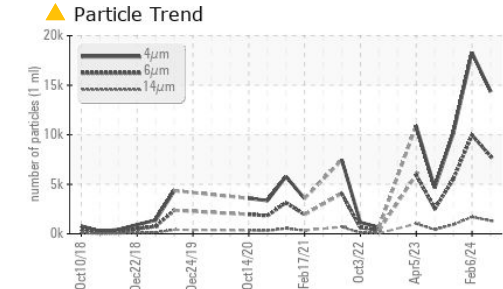
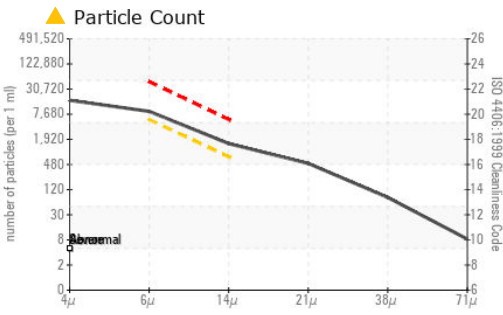
There is a high amount of particulates present in the oil.

Silicon	ppm	ASTM D5185m	>25	6	8	8
Potassium	ppm	ASTM D5185m	>20	0	5	2
Fuel		WC Method	>5	<1.0	<1.0	1.9
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.2	0.2	0.1
Nitration	Abs/cm	*ASTM D7624	>20	7.3	6.5	4.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	16.3	15.4	13.3
Particles >4µm		ASTM D7647		14354	18295	10161
Particles >6µm		ASTM D7647	>5000	7820	9966	5535
Particles >14µm		ASTM D7647	>640	1331	1696	942
Particles >21µm		ASTM D7647	>160	448	571	317
Particles >38µm		ASTM D7647	>40	69	88	49
Particles >71µm		ASTM D7647	>10	7	9	5
Oil Cleanliness		ISO 4406 (c)	>19/16	20/18	20/18	20/17
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG

FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<1	2	1
Boron	ppm	ASTM D5185m		22	46	5
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		15	13	4
Manganese	ppm	ASTM D5185m		0	<1	0
Magnesium	ppm	ASTM D5185m		19	58	10
Calcium	ppm	ASTM D5185m		3277	2366	2622
Phosphorus	ppm	ASTM D5185m		971	1056	1201
Zinc	ppm	ASTM D5185m		1112	1247	1350
Sulfur	ppm	ASTM D5185m		4168	3077	3462
Oxidation	Abs/.1mm	*ASTM D7414	>25	11.1	9.2	6.9
Base Number (BN)	mg KOH/g	ASTM D2896		10.16	10.36	10.50
Visc @ 100°C	cSt	ASTM D445		12.8	11.1	11.9



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KL0014524 **Received** : 18 Apr 2024
Lab Number : 06153287 **Tested** : 23 Apr 2024
Unique Number : 10983365 **Diagnosed** : 23 Apr 2024 - Don Baldrige
Test Package : MOB 2 (Additional Tests: PrtCount)

To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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